# THE AGRICULTURAL MAGAZINE.

CAMDEN, NEW JERSEY, JUNE [illegible], 1826.

The weather, with the exception of a few days during the last month (May) has been as warm as we generally experience in July and August, the thermometer having some days rose even within a few degrees of being as high as on the warmest days last summer. At Camden, it rose to 95 degrees, in the shade at 1 o'clock, and at Boston, it is said to have risen as high as 100. In Philadelphia, from the 1st to the 25th of May, its average range at noon in the shade out of doors, was 78¾, eight degrees higher than between the 1st and 25th of May 1825, which averaged only 70½ degrees.

In addition to the intensity of heat, we have been visited with a very unusual drought, perhaps without a parallel in this climate for extent and severity at this season of the year ; the quantity of rain that fell in May, at Philadelphia, as indicated by the rain guage of Mr. Thomas Smith, was only fifteen hundredths, (little more than one eight) of an inch on a level surface. This with the heat of the suns rays, had an injurious effect upon the progress of vegetation, and presented for a season but gloomy prospects to the industrious husbandman, not only in our own, but neighboring, and still more remote states, both North and South of us. The ravages of the Fly, and Locusts, in Virginia & some other places, also contributed to excite alarm bordering on fearful apprehensions of a general scarcity, from an extensive failure of grain, grass, and vegetable crops.

Appalling fires, broke out in the woods, destroyed thousands of cords of wood prepared for the market, and tens of thousands of acres of waving forests ; and dismal to relate, several lives are said have been lost in contending with the furious and resistless element; in short, it almost seemed as if the operations of nature were frowning upon the futile exertions of man ; the dreary picture of the prospects of the farmer, drawn by the papers from most of the Atlantic states, the drooping foliage and parched earth around us, the atmosphere loaded with dust, the majestic columns of distant smoke, rising in various directions in lofty and awful curls, condensing as it were, into barren clouds, seemed to load the evening breeze with materials for gloomy sensations, instead of the balmy and exhiliarating dews of heaven, and to teach a lesson of deep humiliation and despendency on "him who presides over the seasons, and rules the destinies of the Universe;" who hath said, "while the earth remaineth, seed time and harvest, and cold and heat, and day and night, and summer and winter shall not cease." In conformity

with this sacred promise, we have been within a few days past, providentially and measurably relieved from the inauspicious forebodings the aspect of season naturally engendered, by refreshing showers in many parts of the suffering country ; and although they have been but light in our own particular neighborhood, we rejoice to learn they have been copious in others; and sincerely hope they may have been co-existent with the drought itself, and may happily be the means under Providence, and the honest exertions of the skillful husbandman of reviving vegetation, and of rescuing the crops from the serious injury with which they were ten days since, apparently threatened. Under the impressions of which, we presume the following excellent and well timed observations were penned by Mr Jacob Mann, Editor of the Morristown Palladium.

"With present prospects, nothing apparently can save us from scarcity, but the smiles of Divine Providence upon our redoubled exertions, new experiments and careful husbandry. That portion of the season still before us, should be improved to the best possible advantage. Potatoes are seldom cultivated in sufficient quantities, in this country, and to our disgrace do we yearly see announced in the papers of our cities, the arrival of ship loads of Potatoes from Liverpool—from Ireland—from Nova Scotia, and elsewhere, for our consumption. This should never be so.—Buckwheat though at seasons a precarious crop, may be productive, and should not be sown sparingly. Indian corn sown broad-cast may furnish much for the sustenance of cattle. Beans and Peas may yet be cultivated to advantage. The Roota Baga and other Turnips are valuable for the cultivation of the farmer : but the most productive article, within our knowledge to supply the deficiency of Hay is *Millet*, and the proper season for sowing it is now at hand—from the 1st to the 15th of June, is considered the most suitable time—three pecks of seed should be sown to the acre, upon ground well ploughed and well pulverized with the harrow—a light brushing is sufficient to cover this seed, which is small and does not come up so well when covered deep : if sown upon light and mellow ground, just before a rain, no covering is necessary, and it would be well to defer sowing to the 15th of June, if such a juncture can be obtained by the delay; for it is a crop that grows rapidly, and if irregular in first sprouting, it will continue to be irregular throughout its whole growth. A common sward, or clover completely turned under, is well adapted to the production of this crop, which on strong or very fertile ground, with seasonable weather will yield from *three* to *four tons to the acre* of hay, worth three dollars the ton more for cattle or horses, than any other raised in this country ; this, at least, has been the result of our experience. Millet, when cultivated for hay, should be cut with the scythe, when the seed commences ripening, which may be correctly determined by a yellow appearance at the tops of the heads.

This crop is produced in about ten weeks, and is peculiarly adapted to the warmest part of the season ; we would therefore suggest for experiment, whether it might not be obtained to advantage on ground from which the wheat, rye and oats crops have been cut;

and still come off in time for sowing wheat or rye for the next season."

It is said corn in some instances, planted last month has not as yet vegetated, and still lays dry or rotten in the ground; it may perhaps not be amiss to observe, that experience of the editor, as well as others, warrants the conclusion that a crop of corn may be obtained from a light soil in a good state of cultivation, after the 1st of June. In the year 1818, the editor had the corn on a small field destroyed by the cut worm, just as it was coming up repeatedly, until the 13th, and 14th days of June, when he had it again replanted, and contrary to his own expectations, as well as those of his neighbors, gathered from it the ensuing fall, as good a crop as most of the neighbors. who had been more fortunate with the earlier planting. The seed however, had been previously prepared by sprouting, and rolled in plaister of paris, and no doubt but the inefficient means or experiments that had been tried to destroy the worm, such as soap suds, ashes, &c. which had been copiously applied, had imparted an additional degree of fertility to the soil, and acted as a powerful stimulus to the vegetative principle. The ground being moist, and the season dripping the seed came up in the course of a few days, and grew and flourished with astonishing rapidity, and ultimately yielded what we should esteem at least an average crop.

Notwithstanding the late rain (for which we cannot be too thankful,) has, in a good measure allayed the apprehensions that had been excited on account of the crops, from the best information we can obtain, it was rather too late wholly to restore the crops of oats, and early crops of grass, particularly the upland, some of which, having already been mown, and much more now fit for the scythe; those crops will therefore in all probability fall considerably short of an average crop. Some species of vegetables have also suffered severely, such as the early and sweet potatoes, hundreds of hogsheads of water having been used in transplanting the latter. Vine truck generally looks well, and the corn which was planted sufficiently early to get up before the commencement of the drought, appears to have been but slightly effected, the plant requiring but little moisture in the early part of the season. The prospect of fruit is likewise at present promising, as is also that of rye and wheat generally in this section of the county, although it is to be feared, that some fields have been seriously injured as they begin to exhibit aymptoms of premature maturity; and we regret to state, that we still continue to receive distressing details of the effects of drought in some neighborhoods that have had but little, if any of the late rains.

We extract the following article from a southern paper, from which our readers may infer the prospects of crops in that part of the country; there has, however agreeably to the papers, been fine rains in several of the southern states, as well as in our own, since it was written.

"The Crops—Farmers say that after the 20th of May, they can judge of the prospects of the wheat crop with some accuracy, at least so far as it may be affected by the Hessian Fly. On the first of May the crop, upon all improved lands, was fine—the greatest

anticipated loss was from defective seed, occasioned by the weavil fly, of which seed there is much. The fly made its appearance later than usual this season, owing to the cool and damp weather. The heat and drought of May brought it into life and action, and its ravages have been severe--whole fields are now destroyed—the thin lands will scarcely produce their seed—some not half—The good and the manured lands are greatly injured, and the continued drought prevents recovery—prospects are gloomy—upon the whole we have scarcely seen the approach of June with such general bad appearances. Rain even now would improve the well farmed land crops, but nothing can restore the general loss.

Corn is low and late, but the drought enables the farmer to work it well and destroy the weeds and grass—in its young state Indian Corn suffers but little from drought. Oats promise nothing—the Gardens suffer extremely—the fruit generally destroyed--Grass never promised a worse crop.

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## SALEM COUNTY AGRICULTURAL SOCIETY.

The first Cattle show and exhibition of this society was held at Salem on Tuesday the 16th of May inst. when the novelty of the occasion and the general interest manifested for the ultimate success of this institution attracted a concourse of the wealth and respectability of the county.

After some previous arrangements had been made, and a temporary adjournment of the Society at large taken place, the executive committee went into the appointment of a committe of view as prescribed in the 8th article of the constitution, when the following persons were appointed, viz:

HEDGE THOMPSON, Esq.
Doct. THOMAS YARROW,
CLAYTON WISTAR.

When the above committee proceeded to the discharge of their duty, accompanied by the society at large, according to the arrangement previously adopted.

The committee of view having examined the different kinds of stock, as well as the various articles exhibited, and being satisfied as to the respective merits of each, made report accordingly to the executive committee.

At 1 o'clock according to arrangement the bell was rung, when the society repaired to the Court House, where the address of the President was delivered: an adjournment then took place to 3'o-clock, P. M. when the following premiums were announced.

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| To Richard Somers, for the best Stud Colt (by Sultan) | $5,00 |
| To Lewis Green, for the best Filly (by Sultan,) | 5,00 |
| Robert G. Johnson, for the best Bull, of the improved breed, | 3,00 |
| George Hall, for the best Bull Calf, under two years old of the improved breed. | 3,00 |
| Job Tyler, jun. for the best milch Cow of the improved breed | 5'00 |
| Robert G. Johnson, for the best pair of working oxen. | 5,00 |
| Joel Fithian for the two best heifers | 5,00 |

Robert G. Johnson for the 4 best full merino shearling ewes 3,00
Robert G. Johnson, for the best full blooded merino buck, 3,00
To Joseph Black, for the 4 best ewes 7-8 Bakewell breed. 3,00
Joseph Black, for the best Buck of the Bakewell breed. 3,00
David Ware, for the best Boar. 2,00
Joseph Hancock, for the best Sow and six pigs. 3,00
Mrs. Elizabeth Miller, for the greatest quantity of butter and cheese produced from 8 cows, from the 2d of July to the 15th of December, previous to which they had suckled the calves for 3 months, 1-2 doz. Silver Spoons.

To Surrage Ayres, (a labouring man) for a certificate from his employer, that he has served him as a hired man for more than two years, during which he has not lost more than six or seven days, and has used no spirituous liquors (to his knowledge) except medicinally in a cure for the ague, and that he has been during all that time, strictly honest, faithful and sober.

A Silver Medal.

The above are all the premiums which it it was in the power of the Society to award at this time.—Many of the Premiums advertised were not applied for; and in asmuch as there were no second premiums offered for the different articles the meed of praise is all that is now in the power of the Society to tender to the owners of the following articles, although many of them were little if at all inferior to those for which premiums were awarded.—

## HORSES.

A Filly 3 years old, by Sultan, (The Sultan is an Arabian imported and owned by Judge Jones of Montgomery county, Pa.) offered by Mr. Job Black—a very beautiful colt, and entitled to the greatest praise.

A Stud Colt, 2 years old, by Sultan, offered by Mr. John Tuft, a very fine colt; combining great size with stoutness and action.

A Filly by Sultan, 23 months old, offered by Joseph Hancock, Esq. large and fine and very little inferior to the best exhibited.

A Filly, by Messenger, 2 years old, offered by Mr. George Hall large and very fine

A Black Stud Colt, 2 years old, by Gay Highlander, offered by David Basset, a remarkably fine colt, combining size, action and figure.

A Sorrel Stud Colt, 2 years old, by Gay Highlander, offered by Peter Bilderback, Esquire, entitled to much praise.

A Grey Stud Colt, by Sultan, from a half blood Arab mare, 2 years old, offered by Mr. Matthew Keasby, is the finest blood shown, and is considered a very superior colt.

A Grey Stud Colt, by Sultan, 3 years old, offered by Mr. John Kille, of Gloucester county, showed very fine points and was much admired.

The Horse "Joseph" 5 years old, was offered by Mr. Thomas A. Maskell—fine figure and an excellent horse.

## CATTLE.

The Bull exhibited by Doctor Elmer, of Cumberland, 3 years old, of the breed of Col. Hare Powell, of Powelltown, Pa. far surpassed all other cattle exhibited, in every point of view. (This Bull has been since purchased by a company of gentlemen belonging to the Society, for the sum of $300.)

Two Spring Calves belonging to JoelFithian and Thomas A. Maskell, were regarded by the committee as of very superior quality.

A 2 year old bull, of the improved breed, exhibited by Mr. John Tuft, showed very fine points and was deemed worthy of peculiar attention.

Mr. Matthew Keasbey exhibited twin cattle, a steer and heifer, fine animals and showing fine points.

## SHEEP.

Paul Scull exhibited three remarkably fine ewes of the Bakewell breed, equal if not superior to those for which the premium was awarded, but inadvertently he had not produced the requisite number and was therefore excluded from the competition.

## MISCELLANEOUS.

The committee were much gratified with the newly invented Straw Cutter, exhibited by Mr. Smith Bowen from Cumberland, and would take the liberty of recommending it to the notice of their fellow citizens.

A Rug of domestic manufacture exhibited by Miss Hannah Black, was received with peculiar pleasure, and was esteemed of very superior quality and workmanship. The committee looked upon this article as entitled to the highest praise, and deemed it a subject matter of regret that no premium having been advertised, it was out of their power to award one for this article.

A barrel of domestic Wine exhibited by Mr. John Powell, was also received with pleasure, but inasmuch as the wine was manufactured before the advertisement of the premiums, and as there was no competition in the article, it was not deemed proper to award a premium.

*The Ceremonies* in the Court-House being completed, and the Society adjourned, the articles for which premiums had been announced were exposed to public sale on the field of exhibition, the most of which were, however, bid in at high prices by their respective owners.

ROBT. G. JOHNSON, *Pres't.*

F. L. MACCULLOCH, *Sec'y.*

Dated 19th May, 1826.

It is with no ordinary feelings of satisfaction that the Society now fulfil the pleasing duty which devolves upon them, of thus publicly announcing, that Messrs. Joseph Hancock, Richard Somers, Lewis Green, Joseph Black, & Job Tyler, jun. the fortunate competitors of many of the premiums announced, have with feelings equally disinterested and honorable to themselves, and generous and munificent towards the society, determined to accept the Premiums a-

warded to them, to be invested by the Society in Silver Plate with appropriate devises engraved, as a per petual memorial of the distinction conferred, but at the same time to return to the society in money for its benefit and advancement the value of such premiums.

Col. Rob't. G. Johnson declines accepting the premiums awarded him, and begs that they be added to the funds of the Society.

F. L. MACCULLOCH, *Sec'y.*

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## ADDRESS

*Delivered before the Salem County Agricultural Society, on the occasion of its first Exhibition, Cattle Show and Fair, held on the 16th May, 1826, by Robert G. Johnson, Esq.*

GENTLEMEN OF THE AGRICULTURAL SOCIETY—I had anticipated that on the day of your annual meeting you would have appointed some member of your society to have prepared an address to be delivered before you at that time.—But as it has been omitted, I feel myself bound in duty (though without any special invitation from you) to address you upon this occasion—hoping that in future some arrangements may be made whereby at our meetings for public Exhibitions, some member may be selected to keep up the practice; which I believe to be universal among all the Agricultural Societies in these United States.

I highly approve of the mode of changing the speakers—because, in the great variety of sentiments and ideas elicited by them, we become better acquainted with the fundamental principles of rural economy, but such an interchange of sentiments as will tend to produce free and candid discussion—and from the plain and homespun remarks that may be collected from our practical farmers in the frequent conferenes which we may have with each other—much good I apprehend, may be expected to be derived.

The truth is—that theory in agriculture may do very well for book writing Philosophers—but for myself, I would much rather prefer the plain, substantial and every day experience detailed by a sound clear headed practical farmer, than volumes which might be written by a theoretical economist.

From the opinion thus expressed—I hope I may not be considered by any of this audience, as wishing to derogate in the least degree from the writings of many gentlemen who have expended much of their time in aiding their fellow citizens in communicating to them their knowledge of Chemistry Mineralogy and Geology.

All such knowledge is useful—very useful—but for us fellow citizens at *this time*, our duty is to extend all the practical knowledge which we can collect, to the immediate benefit of the agricultural Interest of our own county.

From the recent changes which have taken place in the commercial world—and from the uncertainty of foreign markets to buy up the surplus produce of our farms—imperious necessity will impel, and does even now oblige us, to exert all our faculties in devising

ways and means, whereby they may yet be made to yield a suitable return for the labour expended on them—and in reviewing the address which I had the honor to deliver before you at the organization of this society—I cannot withhold from recommending to you at this time, the opinions which I then expressed. You may remember that I called to your recollection the geographic situation of our county—peculiar fitness on the northern and western part of it for agricultural, and on its eastern part, for manufacturing purposes—I then pressed upon your consideration, the immediate attention to the improving of your stocks of domestic animals; and lastly recommended that you should convert a considerable portion of your meadow and good uplands into the tillage and growth of hemp and flax.

The political aspect of the world constrains me at this time to reiterate the same sentiments, and to urge it upon the members as necessary to their own interests and to society at large, by their example and influence, to turn their attention more seriously than they have ever yet done, to the raising of wool, hemp and flax: for I am confident that in a very few years, those articles will be considered; as the staples of our country.

In the cultivation of our farms, we not only calculate on raising a sufficiency for our families, but are frequently anticipating and conversing with our neighbors on the prospect of a good market for our surplus produce. Hence we naturally cast our eyes abroad for a foreign market—and sometimes are even induced to utter a wish that a war might break out in Europe, in hopes that in the turmoil thus produced, we might be the gainers by the opening of a better market beyond the seas for our commodities—Such is the selfishness of our poor, frail, human nature: that we would (if it were in our power) implore and fix upon the transatlantic inhabitants one of the greatest scourges that can befal a people, producing desolation and destruction wherever it may be—so that we might reap benefit from their misfortune and distresses. But fellow citizens, could those immoral desires be gratified by even a wish, still the peace of Europe (at least the western part of it) I think is fixed upon so solid and durable a foundation by the Holy Alliance system (so unrighteously called) that I expect not to live so long as to hear of its being in any serious manner disturbed. My opinion *is*, that henceforward we are to look to ourselves, to our country and laws, and to the energy and capital of our citizens for the consumption at home of the products of our farms. Our markets must be with the manufacturing Establishments in our own land; and it is most fervently to be wished, that we could have in our own county, several manufactories for flax and wool, so that a goodly number of our people might be employed therein—and in proportion to the numbers employed in manufacturing establishments, in the same ratio would our agricultural interests be promoted, by enhancing the price of our agricultural products; in consequence of the youth of our labourers being withdrawn from the farms to become inmates of the factories.

Manufactories, wherever established, I have been informed, al-

ways support a steady market--and as such manufactories might increase, so would the demand for the raw material and the necessaries of life, increase also. Could there be several of the kind spoken of located at the head of our tide waters, the benefit to the farmers of our county would be immense. Being inland your farmers would have the almost exclusive trade with them--for the parts of the neighboring counties contiguous to ours, have but little or no surplus produce to dispose of--and the river Delaware on the west, protects from a competition from foreign states, unless perchance some individual foreigners should by their persevering industry and aptitude for saving and economizing every thing, enter the list of competition, an occurrence, which I think may but seldom happen. I beg your serious attention to this subject--It is all important to us as agriculturalists. Were there manufacturers in this county sufficient to work up all the wool and flax which could be raised here,—what a stimilus would it give us to the production of those articles—and what a regular and what a permanent market also would there be established for the daily supply of the wants of those people, in meat, bread stuffs and vegetables—Observe how great would be the gain—they taking our raw materials, and purchasing from us all their food,—while we on our part would be buying from them such of their manufactured articles as we might want —and thus those same materials also would come home to us again, to be consumed with a simultaneous proffit to manufacturer, grower and consumer. Hence there would be a perfect reciprocity of interest; we paying them for such of their manufactured articles as we might want for our families, and they in turn, paying us for the raw materials and all other the products of our farms, necessary for their support, manufacture and subsistence. In my opinion, this is the true system of rural economy at the *present time.* This is the true and only way of being independent of foreign nations, and not only so, but also of securing to us and to posterity, our and their best and most permanent interests. This is what I believe to be the only method of producing that *balance of trade in our favor* of which we have seen so much in the public prints, and concerning which, volumes have been written, and of which the most celebrated writers on political economy differ very widely.

I may be probably asked, how can this good plan be brought about? I answer, it is difficult to be consumated, I confess: But I would suggest for your consideration gentlemen, the plan which I have been endeavouring to follow for the space of fourteen years past, which is this—in making your purchases for the use of your families and farms—*always, give the preference to the American manufactured article.* If such were to be the universal practice of the farmers of this county, even now that we have no manufactories;—still such a custom would be putting a considerable deal of profit into the pockets of those who are manufacturers of such goods as we might wish to purchase for our own consumption, although they may now reside hundreds of miles from us.

In my former address, I took the liberty of suggesting the propriety of awarding premiums to such labouring men and women as

could give satisfactory evidence to the committee of their good moral character and industrious habbits ;—but from the almost universal prevalence among the labouring classes of society of various kinds of irregularities, I am doubtful whether the stimilus held forth by your society by way of premiums to *the most worthy*, will avail much although I do not as yet despair of the experiment we are making—I am persuaded it is in our power to take a much more extensive view of the subject, than heretofore has been done, and to give such efficacy to our plans, as will redound ultimately to the benefit of the physical and moral condition of the present and future generations of the poorer classes of society—such a plan as I now suggest, or of any other which may be thought better, and which will have ultimately the effect of producing the greatest possible good in directing the views, enlarging the understanding, and inculcating a sound and efficient system of morals upon the youth of both sexes committed to your care during their apprenticeship and non age, I am persuaded, is most sincerely to be desired, and I trust will be most cordially approved of. I therefore in the most respectful manner, take the liberty of recommending to the members, the propriety of a systematized course of early instruction in the principles of the christian religion, (other than has been generally heretofore practised in this county) all the youth both male and female, who may now, or hereafter reside in your families as indented servants or otherwise—by obliging them to attend every sabbath day at the meeting houses where you respectively assemble to worship ;—and as an auxiliary thereto—where associations can be formed, and local situations selected suitable for the establishment of schools, for the Sabbath afternoons; *there* they could be sent, and placed under such persons as teachers, who might be chosen by you for their capability, zeal and piety, so that, *that day* should be devoted by them to the acquisition of that kind of religious instruction (which is so much to be desired) as would fit them before their entrance into the world, for being useful to themselves and society, and lay a sure foundation for their future and eternal happiness.

There are many instances on record both of Teachers and pupils of the Sabbath Schools, in the different parts of the United States, becoming hopefully pious And should such, or a similar plan, as is now suggested be approved of by you—and put into complete operation,—I hesitate not in saying, that I firmly believe you will in a very few years, see it productive of the most salutary advantages. And what greater benefit can we confer on the rising generation, and particularly upon those poor and friendless children of want committed to our care, than that, while through the week they are drudging upon our farms, and toiling for us, and by their daily labour acquiring a knowledge of Agricultural business, *they* should on the sabbath be employed in acquiring that "knowledge which passeth all understanding." It is a duty incumbent upon parents, masters & guardians, inculcated in the scriptures, which direct them to "train up a child in the way he sould go; and when he is old, he will not depart from it.—Again it is said we should instruct the rising generation "that they might set their hope in God and not forget the

word of God—but keep his commandments. And I am sure that it would gladden the heart of every individual who now hears me, could he be certain that in the space of 2 or 3 years, all the youth of our county could be engaged in so profitable and delightful an employment during the sabbath—much more than lolling in idleness, or rambling in search of unlawful gratifications and pleasures—both alike subversive of the peace and order of society and at variance with the dictates of sound morality.

In pursuing such a course of discipline and instruction under prudent, discreet and pious teachers, I am persuaded that in the course of a few years, there would be such a visible improvement in the morals of the youth in our county—that many of those vices and irregularities which are now so prevalent, would then be exceedingly rare.

Before I close this address, it may be perhaps gratifying to many were I to give you the opinion and sentiments of one of the greatest and most learned Grecians of antiquity upon agriculture. The translation is as follows. "There is no condition in life, says he, however exalted, that should exempt a man from the practice of Agriculture. By exciting in the soul an arduous activity for labor, it diffuses the most pure and delightful satisfaction. In augmenting our riches, it exercises the body and gratifies every rational wish of a free agent. The earth not only rewards the toil of cultivation with those blessings essential to the support of life, but also indulges us with whatever can contribute to the embellishment of our persons, our houses, our temples. Our senses are regaled with the most agreeable and exquisite perfumes, and enraptured with varied prospects of hanging woods and enamelled meads. The increase of flocks and herds, necessarily arising from agriculture, is productive of a variety of aliments, destined for offerings to the gods, as well as for the sustenance of man. But in this liberal dispensation of her choicest gifts, the earth denies their enjoyment to sloth and inactivity: requiring rather, that the body habituated to the inclemency of winter, and the severest heat of summer, should become almost invulnerable, and capable of enduring every kind of fatigue. The task of manuel labor, in obliging us to be thinly clad, considerably augments the strength and vigor of the constitution; and the necessity of rising early, incumbent on all good husbandmen, by an uniform course of exercise, renders them robust, diligent and courageous. Each season has its peculiar employments, conducive to the prosperity of the citizen and the villager. He who wishes to serve his country as a warrior, will find material advantages from breeding and training coursers for the field. Agriculture forms men for the camp, by inuring them to hardships. Their expertness in digging, makes them singularly useful in passes and intrenchments; and their dexterity in the chase; speeds their unerring shaft in the day of battle. What other art so bountifully distributes to its votaries the necessary wants of existence? Or what other art so amply recompenses their care and assiduity? A cheerful fireside in the country, resists the roughest blasts of winter; and a free circulation of air; the coolness of winding rivulets, and lofty groves,

abate the intolerable ardor of summer. A man of independent fortune will find agriculture the most agreeable and satisfactory of all employments, and what will furnish him with maxims of the strictest propriety of conduct in every station of life. In the cottage, justice is never perverted, since the best labourer is always the best paid. Humanity and reciprocal assistance to the wants of their fellow creatures, are daily practised by those employed in cultivating the same field with the sweat of their brow. Here the General may learn to instill obedience into his troops, by following the example of the farmer, who invites his laborers cheerfully to fulfil the task assigned them; rewarding the diligent and punishing the idle. A good framer sees the indispensable necessity of animating his laborers; in the same degree as a General does his soldiers; and the hired peasant, who works for bread, has even more occasion for encouragement to perform his task with alacrity, than the voluntry companion of honor. Reverence to the Supreme Being is always inculcated in the most forcible manner, from a constant series of observations, that all things are dependent on the will of Providence, that snow and hail, frost, drought, storms, blights and a thousand epidemical maladies, destroy the fruits of the earth and defeat the best efforts of assiduous industry, directed by consummate prudence.

Agriculture seems to possess an incontestible right to the title of parent and nurse of all other professions. Observe a country, where agriculture flourishes, and you will behold arts and sciences flourish in equal perfection But where devastation lays waste the soil, or slothful neglect induces men to leave the earth uncultivated, a general stagnation, in maratime, as well as commercial affairs, immediately aucceeds.

*Gentlemen*—I feel exceedingly rejoiced indeed to behold so large and respectable a number of our fellow citizens assembled upon this occasion. It augurs the most fortunate circumstances for the future prosperity of our society—and when I see so many distinguished agriculturalists from distant parts of the neighboring counties uniting with us in the pleasure of this day—it incontestibly proves that an ardor for the best interest of our common country is pervading this western part of our state. Persevere then, brother farmers, in the laudable work in which you have so recently engaged—and although we are the last of the counties in forming an Agricultural Society—yet by our zeal, industry, perseverance and unanimity—we may in a few years, rival, if not surpass all our sister institutions. Such rivalry is truly praise-worthy in the highest degree...when the greatest and most important interests to ourselves and our country are to be obtained by it. It has a tendency of quickening into action all the finer feelings of our nature; without imbittering our real pleasure...or exciting any ignorable or envious feeling in our breasts.

Relying then upon the wisdom and guidance of Divine Providence, let us implore the Greator of the Universe, to direct us in all our undertakings, and to fill our hearts with gratitude for so many, and such distinguished favors.

## COUNTERFEIT NOTES.

We some time since published a list of Counterfeit Bank Notes that were then in circulation, and as this villainous species of fraud has since increased, and many more been distributed in almost every direction of the country, and palmed upon the unsuspecting as good paper, we conceive we cannot give our readers a more useful article than the following list of Counterfeits on the Banks of the States of New York, New Jersey, Penna. Delaware and Maryland; which we extract from Conine's Lottery Intelligencer, and hope it may be a means of protecting them from the impious attempts of the counterfeiter.

### NEW YORK.

10' Mechanic's bank letter C, dated February 22, 1819, John Fleming, cashier, Lorrillard, president.

5's do do dated February 22. 1821.

5's Mechanic's bank payable to F. Cooper, letter D, dated Feb, 22, 1819,

3's Mechanic's bank payable to D Clinton, dated July 1, 1821, letter F, Jno. Fleming, cashier, J L Williams, president Rham, letter C, dated February 22, 1819.

3' Mechanic's bk payable to J Fleming, dated November 1, 1823.

3's Mechanic's bank payable to A C De Rham, letter C, dated February 22, 1819.

1's Mechanic's bank.

5's Bank New York, letter D, dated January 4, 1820.

5's bank New York, letter D, dated January 1, 18 0.

2's Bank New York letter A and B, dated December 1, 1819 Chas. Wilkes, cashier Matthew Clarkson, president.

1's Bank New York, dated August 1, 1819 Chas. Wilkes, cash Mat. Clarkson, president.

10's Phœnix bank payable to J Pinkney, dated May 1, 1822. E Cuyler cashier H. Slidell, Pres't.

500's Phœnix bank, payable to Rufus King, letter B.

10's Phœnix bank letter B, dated April 1, 1822, Thomas B. Ross, cashier, H A Low, President.

10's Phœnix bank, payable to G Willis, letter B, January 1 1824.

1's Phœnix bank, payable at the Litchfield branch, dated August 1, 1819.

2's Phœnix bank, payable to J. Robins, letter C, dated August 20th, 1822, J Delafield, cashier, J Boggs, president.

5's Merchant's Bank, letter E, payable to H Rankin, dated December 1, 1820, G V Broom, cashier Lyde Catlin, president.

5's do do payable to R King letter A, dated February 23, 1822, H Post, jr cashier, Samuel Leggett, Pres't.

2's Merchants bank, letter A, dated September 4, 1824, G V Broom, cashier, principally G Watson president.

5' Franklin bank, pay to W Underwill, letter C, dated November 25, 1823.

3's Franklin bank, payable to D Burlas and Lafayette, letter D, —H Post, jr cashier, D Leggett, president.

5's Union Bank.

1's do do letter H, dated June 1, 1825, G A Worth President, John Low pres.

1's Manhattan Company, letters I i, dated January 1, 1822. Robert White, cashier, H Remsen president.

5's Manhattan Company, payable to H Rutgers, letter Gg, dated June 1, 1823, Robt White, cashier, H Remsen, president.

1's Manhatten Com. dated February 11, 1824.

5's Bank of America, payable to James Monroe, letter F, dated Sept 1, 1819.

5's Bank of America, payable to S Howe, letter A dated May 1, 1824, James Clery, Cashier, E Dudley president.

10' State Bank New York, letter O, dated November 1st and 25, 1820.

10' Bank of Utica, payable to R Brent letter A dated July 1, 1819, O Seymour cashier, H Huntingdon, president

3's Mechanic's and Farmers bank, Albany, letter F May 14, 1818.

2's Mechanics and Farmers bank, Albany dated February 2, 1819, T Wolcott, cashier, B Noah president.

3's Bank of Chenago. payable to F Mead, dated September 8, 1818.

3's Bank of Chenago, payable to Trueman Enos, letter D, dated September 4, 1821.

3's Bank of Chenango payable to J C Yates, dated November 1, 1823.

10's Bank of Troy, letter F.

3's Bank of Troy, letter Z, dated April 7, 1819 and 21, Chas. Douglas, cashier, E Warm, president.

—'s Bank of Troy, letter Y, dated May 2, 1814, & August 7, 1814.

2's Bank of Troy, payable at the branch bank, at Waterford, letter A, dated September 6, 1823.

1's Farmers bank of Troy, letter E.

10's bank of Geneva, letter A, dated January 1, 1824, payable to R Troup, H Dwight, president J Rees. cashier.

10's bank of Geneva, payable to R Troup, dated August 1, 1823.

3's Bank of Geneva.

2's bank of Geneva, dated October, 1818, J Rees, cashier, H Aweight, president.

1's do do letter A, dated January 1, 1819,

5's Ontario bank, payable to F Chapin, letter F, dated February 1, 1820, M. W. Gibson, cashier, N Goscham, president.

2's Ontario branch bank of Utica.

2's Ontario bank, letter C, payable to B. Johnson, dated Canandaigua, February 1, 1820, H W Gibson, cashier, N Gorham president.

1's Ontario bank payable to J Parker at Branch bank at Utica, dated July 4, 1823, J H Lothrop, cashier, A B Johson, president.

1's do do letter B, dated May 1, 1820 and 21.

5's Bank of Newburgh, payable to N Patterson, letter G, dated August 1, 1817, J B Brown, cash, A Kellog, president.

5's do do dated September 9, 1819, A W Walworth, cashier, A Belknap, president.

5's Bank of Auburn, letter A, dated April 1, 1817, and October 8, 1817.

5's Bank of Orange county, letter C, dated November 10, 1818.

1's 2's and 3's do do.

2's Catskill bank.

5's Central Bank, Cherry Valley, letter E, dated January 3, 1819, A M Schermerhorn, cashier, A White, president.

1's do do payable to R. Gillson, letter B dated September 1, 1823

1's Jefferson County Bank.

3's do do.

2's Washington and Warren bank payable to J Case letter Bb dated August 1, 1824.

1's do do payable to A Beil, letter Aa, dated August 1824.

5's Bank of Plattsburg, dated October 17, 1817, 2's 3's and 4' do do.

3's Bank of Niagara, payable to J F Bowman, letter D, date October 1, 1817, J Q Searse, cashier, J Kebbe, president, bank broke.

3's do do at Buffalo, dated February 22, 1817.

5's Bank of Columbia at Hudson.

## NEW JERSEY.

10's State bank at N Brunswick letter F and B various dates John Bray, cashier.

5's do do payable to S. Bishop, letter D and E dated February 2, 1821, D. U. Dishborough, cash, John Bray, president.

3's do do payable to L Durham, letter A dated March 6, 1817.

3's Sussex bank of Newton, payable, to D Ford, letter D dated March 1, 1822; S. Morford, cashier, E Grapevine and Daniel Stuart, presidents.

5's Patterson bank letter C dated May 1, 1824.

3's do do payable to G P Harper, letter B dated April 1, 1818.

3's do do letter C dated May 1, 1824.

3's State bank at Trenton, payable to J Barness, letter B dated March 26, 1814, Charles Gordor, cashier, Abner Reeder, president.

2's do do payable to Geo. Watson, letter D dated May 27, 1323.

1's do payable to Geo. Watson, dated May 5, 1822.

1's Trenton banking co. payable to T Budd, letter C, dated Sept. 22, 1818, P Hunt, cashier, J Beatty, president.

3's State bank at Morris, letter E.

3's Commercial Bank, at Perth Amboy, payable to John Bruen letter A, dated May 12, 1823, Wm. Whitehead, cashier, J Parker, president.

3's do do July 1, 1823; president and cashier the same.

5's Jersey city bank payable at the Ontario bank New York, E E Boudinot dated November 12, 1823, J Kissam cashier, Samuel St John president.

1's Jersey city bank dated jan. 4, 1819.

3's State bank at Newark payable at the Mechanic's bank New York; letter F to J Bruen, dated Newark January 2, 1818, E J Graham, cashier, Elias Van Arsdale, president.

2's Newark banking and insurance co. letter C dated January 7, 1822, Silas Condit, president A Beach, cashier.

I's State bank at Elizabeth, payable to T Salter, letter C, dated January 6, 1824.

5' State bank at Camden payable to A Gold, letter A dated March 4, 1821, Wm. Hillegas cashier; R M Cooper president.

## PENNSYLVANIA.

5's and 500's bank of the United States payable in Philadelphia, letter B, dated January 1, 1817. Thomas Wilson cashier, L Cheves president.

5's do letter A, dated September 7, 1819, John Smith, cashier, L Cheves, president.

10's bank of Philadelphia payable to J Jame and R Shade, letter C dated September 7, 1819, and December 8, 1820, Q Campbell, cashier, J Read, president.

5's same bank payable V Wier, letter C, dated January 4, 1824, same cashier and president.

5's Bank of Pennsylvania in Philadelphia, payable to E Evans, letter C, dated April 7, 1819 E Chauncey, cashier, J P Norris, president.

10's Farmers and Mechanic's bank of Philadelphia payable to J Koun, dated February 10, 1825, letter C, Tagert president, Kuhl, cash.

20's Bank of the Noth'n Liberties payable to J Jenks, letter G dated January 1, 1815.

5's Steph, Girards bank payable to J Ross, letter C dated November 3, 1720, G Simpson, cashier.

5's do do dated January 1, 1823, payable to R King, letter C.

10's Commercial bank of Pennsylvania in Philadelphia, payable to H Clay, letter C dated January 8, 1824, J. Williams, cashier, A Bayard president.

5's same bank, payable to T. Astly, letter B, dated March 4, 1819, cashier and president the same.

50's Farmers and Mechanies bank of Philadelphia, letter b.

5's Harrisburg bank letter D; dated May 14, 1819, payable to H Alvard, J Foster, cashier, Thomas Elder, president.

5's Gettysburg bank, payable to J Kerr, letter D dated November 1, 1821, J B M'Pherson, cashier, J M'Conaughy president.

10's Easton bank payable to J Post, letter C, dated February 1, 1824. Thomas M'Keen, cashier, Wm. Stigreaves president.

2's same bank letter A, dated July 3, 1815.

10's Farmers bank of Bucks Co letter A, September 4 and 10, 1819, Geo Hamson, cashier, Geo Hulen, president.

10's same bank, payable to F Pincon, letter A, dated February 6, 1815, Geo. Harrison, cashier.

5's same bank.

2's Bridgeport Manufacturing Co. no such Institution.

## DELAWARE.

5's Bank of Delaware at Wilmington, payable to S Bush, letter U and V dated September 9, 1821.

3's same bank, payable to J Erskine, letter D dated July 7, 1824, E Worrell cashier, Thomas Bailey, president.

20's bank of Wilmington and Brandywine, payable to C Adams, letter B dated July 4, 1823, Evan Thomas, cashier, John Forbes, president.

3's same bank, payable to J Jones, dated June 26, 1814, D. Byrnes, cashier, John May, president.

3's Farmer's bank of Delaware, at Dover, payable to L M'Lane, letter C, dated September 15, 1815, J Harper, cashier.

Farmer's bank of Delaware, letter D, payable at Wilmington, dated Dover, 2d day of July, 1815, H M Ridgely, president, S G Brinchel, cashier.

1's same bank, payable to J Manlove, letter B, March 3, 1823, G P Comegys, cashier, H M Ridgely, president

Farmer's Branch bank at Wilmington, payable to J Ramsey, letter D, dated July 2, 1813, J Harper, cashier, H M Ridgely, president.

## MARYLAND.

100's Franklin bank of Baltimore, payable to A Leakin, dated December 1, 1819, James L Hawkins, cashier, P Moore, president.

5's same bank, same date, cashier and president also the same.

5's on the Franklin bank of Baltimore, (recently new emission.)

5's Marine bank of Baltimore, payable to J Rodgers, dated June 2, 1817, J Bier, cashier, Hez. Waters, president.

3's same bank, dated September 5, 1819, J Burr, cashier, A W Wallworth, president.—1's same bank.

2's same bank, letter D, dated November 2, 1819, J Bier, cashier.

5's Farmer's bank of Maryland, Elkton branch, letter H, dated September 4, 1819, J B Brown, cashier, A Kellog, president.

Farmers bank of Maryland, Annapolis, letter A, payable to H Payson, dated 4th April, 18—H H Harwood; Prest. J Pinkney cashier.

5's Farmer's bank of Maryland, letter H, payable to J Wilson, dated Annapolis, 1st August 1818, J. Pinkney, cashier, H H Harwood President.

3's Farmers bank of Maryland, Annapolis, letter B, payable to J Jones, dated 9th June, 1817, R P Wert, cashier, J. Woodbridge, President.

3's Annapolis branch, John Pinkney cashier, H H Harwood, President.

2's Easton Branch bank payable to Ns Hammond, letter B, dated April 8, 1818, and April 1st, 1818, J Pinkney, cashier, H H Harwood, President.

2's Hagerstown bank, payable to D Sprigg, letter B, dated Nov. 21, 1814.

10's Elkton bank of Maryland, payable to J Sewall, letter A, dated July 4, 1821, T Harding, cashier, H Henderson, President.

20's bank of Elkton, letter A, dated May 24th, 1811, J Sewall, president.

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FROM THE AMERICAN FARMER.

## CAST IRON GRIST MILL.

MR. SKINNER, *New Jersey, Near Philadelphia.*

In the 40th number of the Farmer, my attention was drawn by Mr. Smith, of Virginia, to a late invention of a cast iron grist mill, represented "to be capable, with one horse, of grinding ten bush-

els of wheat or rye per hour, sufficiently fine for *flour**." This mill seemed valuable for this and other neighbourhoods, where water mills are not numerous: and from the inconveniences of last summer's drought especially, I have been at some trouble to investigate its merit. I have profited by the diversified information of your many correspondents; I would, therefore, as a token of my obligation to them, add the following description of the structure, performance, &c. of said mill, to the common stock of knowledge, so copiously contributed to your excellent paper for the public benefit.

The mill is composed of two circular cast iron plates, 18 inches diameter and one inch thick, finely furrowed alike, with a breaker, consisting of two parts, for breaking ears of corn, plaster, &c.—one of which parts will be firmly affixed to the upper plate, and one to the lower. The upper plate is permanent, and has attached to it a curb, or hopper, six inches diameter at the bottom, and fifteen inshes at the top; there is a hole through this plate, corresponding with the bottom of the curb: the interior of the curb is lined with angular teeth or jaws, reaching from the bottom nearly to the top. The lower plate is the runner, and has attached to it a conically shaped breaker, from four to five inches diameter, in which are similar angular teeth or jaws—this, when the plates are put together, for working, passes into the curb, and nearly through it, forming the breaker, for breaking all articles fine enough to be received between the plates. The spindle of the mill passes through this breaker, and is regulated by two cross bars, one at the top and one at the bottom of the mill, and passing through them. It runs on a pivot in the usual way, and is centred on a bridge tree, to be raised or depressed, as fine or course grinding is required. *Two* horses grind from eight to ten bushels of ears of corn *for provender* per hour; and from six to eight bushels of rye per hour, fine enough *for distilling*. Four horses grind from 12 to 14 bushels of rye per hour. Were these mills driven by water, they are supposed to be equal to 4½ feet mill stones in execution. They require but little room, and only the same wheel work as othor horse mills The price of a single right with a mill, exclusive of gearing is one hundred dollars. A single mill weighs about 250 lbs. D. G. S.

## ADVANTAGE OF SMALL FARMS.

Most of our farmers cultivate two much land in many parts of this county, (Middlesex, Mass.) 100 or even 150 acres would not

* Mr. Smith does not vouch for the truth of it:—We do not believe there is any such mill to be relied on for grinding with one horse *one* bushel of wheat per hour, fit for family use: much is said in the papers of these labour-saving family mills, and surely, since droughts are so intense and numerous, nothing can be more desirable, or would be *more saleable* than such contrivances: why then are they not in general use? Where are they to be seen? Who has, even for two years used a horse mill for grniding for family use? Who has seen two *cast iron* surfaces used for grinding in one year?—The fixtures for grinding plaster of paris, on the principle of the coffee mill are common, and answer their end; but we wish to see the *flour mill:* we believe their is nothing better than the old fashioned *hand* mill. We will gratuitously circulate for the inventor or proprietor a knowledge of any such mill through all the states.—Ed Am. Farm.

be called a large farm. The evils of possessing so much are obvious; great expense of labour, and imperfect cultivation; by which the land is impoverished, and comparitively but small profits realized. It is a common idea among farmers, that the best investment of property because the safest is in land. When therefore they have accumulated a sum of money, they will if possible enlarge their farms. But, in most instances it would be much more for their interest to convert all their surplus money into specie, and lock it up in their desks, or bury it deep in their cellars, than to multiply their acres beyond the means of good cultivation. It is remarked by a certain writer that, "*The farmers of New England are yet to learn the immense productive power of a perfectly cultivated acre.*" To raise 100 bushels of corn a man will plant five or six acres! How much labour would be saved and how much would his land be increased in value, if, instead of dealing out his manure over this large field as if it were Calomel, he would plough it into two acres, (some say one acre) of the best of his land, and gather his 100 bushels from them? And instead of mowing over 20 acres with his hired hands, in order to get 10 or 15 tons of hay, how much better would it be for him, with the hands which nature gave him, to mow only half a dozen of well prepared acres, and obtain an equal number of tons from them. I feel very confident that with a few exceptions, every man who owns a farm of 80 or 100 acres, might by a wise and improved cultivation of one half of it, and perhaps less, realize more produce and far greater profits, than he now does from the whole. One half, therefore, had better be sold; unless, by converting into pasture land, it will yield him more than six per cent interest, for he must remember that it must be fenced and taxed. In one of the Roman writers on husbandry, is a story of Paridus, "who had two daughters and a vineyard. When the eldest was married he gave her a third part of the vineyard, notwithstanding which he obtained from two thirds of it the same crops as from the whole.—When the other daughter was married, he portioned her with half of what remained, and still the produce of his vineyard was not diminished.

## MILL WHEELS.

Extract of a letter from an eminent manufacturer in Europe, of thirty years' experience to his correspondent in Harrisburg:

"It appears to me a strange idea of having *two* wheels where there are more than two pair of stones, which you say is the practice in Pennsylvania. By this mode, during a scarcity of water, there is a disadvantage, rather than a benefit. A *wooden** wheel is better working, than standing, if it ever has been completely wet; and besides, by having only one wheel, there will be a very great saving of expense—nearly one half. You save not only in the wheel, but in the mill-pit, trough and gearing; and the

*The wheel, afterwards alluded to in this extract, as well as nearly all others that have been erected in Great Britain and Ireland, by persons of capital, for the last twenty years is made of *cast iron*.

additional weight of a large wheel will require a mere trifle more of water, if it be properly applied.

Take care to apply your gearing to the same side of the wheel, on which it takes the water. A wheel geared in this way, will last double the usual time; as there is no strain upon the arms, and scarcely any friction upon the axle. The wheel will nearly float between the weight of the water, and the counteraction of the power. But if you apply the water upon one side of the wheel, and drive off the opposite, you have both the weight of the water and the weight (or resistance) of the works, pressing upon the axle; besides a severe strain upon the wheel.

You may not understand this. I shall endeavour to demonstrate it—suppose you suspend one cwt. to each end of a common weigh beam:—You have then two cwt. pressing upon the fulcrum. Remove one—suppose the *power*—you have then only one cwt.—say the *water*—which also is taken off, by applying the power at the same side; as the one is dressing down and the other up.

Many wheels have been ruined in a short time, by a wrong application of the power.

A wheel should not be driven too slow. My mill-wright says that three feet per second is enough. It may be so in very large wheels. My largest is 34 feet in diameter, and goes at least 3 3-4 feet per second. I would drive a 16 feet wheel (such as you contemplate) at least five. It will give it steadiness; and it will not be so easily checked by any sudden change in the machinery."

## A NEW AND USEFUL INVENTION.

I was highly gratified, a few days since in witnessing the operation of a machine, invented by Messrs. J. Cooper and T. Rarnitt, for ironing and finishing Hats.—It was completely successful—the Hats were finished with the greatest ease to the workmen, in one fourth of the time usually employed, without risk of injuring the hat. A gentleman present of that branch of business, observed it was one of the greatest improvements in their profession: that with the use of his ingenious machine, the hatters may manufacture on such terms as to be able to meet their European competitors in a foreign market. The proprietors certainly deserve to be amply compensated for their ingenious invention.

A FRIEND TO IMPROVEMENT.

## THE SUFFOLK COW.

The suffolk Cow, says an Essex Farmer, though small in bulk—she seldom exceeding, when well fattened, 75 stones of 8 lbs. and is not of the most inviting appearance—is an invaluable acquisition to a dairy. Cows of this breed, though small, generally give, after they have had their second calf, if fairly treated as to keep, on the average, 6¾ gallons of Milk per day, from the time their calf ceases to suck them, till they become dry; and in the year 1823, I knew a Suffolk Cow that gave, on the average, for five months, something more than nine gallons of milk per day. These quantities, and

particularly the quantity last mentioned, appear prodigiously great to come from so small an animal ; but the following extract from *Young's Farmer's Tour*, which was published in the year 1771, tends to verify the statement.

"In several parts of the preceding minutes," says Mr. Young, "particularly those of Suffolk, mention is made of Cows often giving 8 gallons of milk per day. This fact is thought very improbable in some other parts of the kingdom ; and this induced me, on all occasions that offered, to make minute enquiries into the product of the Cows. I can pledge myself for the accuracy of the following statement : Three Cows, one of them a heifer *after her first* calf, the property of the Rev. Mr. Aspin, of Cockfield, in Suffolk, yielded from June to December, 1770, 633 lbs. of butter, the old Cows giving, for some time in the height of the season, each eight gallons of milk a day. These Cows were kept on only three acres of grass, without any change of pasturage, till after mowing time, and, in the winter, chiefly on straw. These particulars," says the author, "prove that I have not dealt in romance, when I have spoken of the Suffolk breed ; and shew that this poor looking mongrel animal is, generally, preferable for the pail, to the large Holderness Cow, one of which would have consumed all the food of the above three Cows, without returning half their produce ; or to the fine Lancashire breed, that sells for such enormous prices."

## THRESHING MACHINE.

A threshing and breaking machine, has lately been invented, and put in operation by Daniel Hulbert, Nathaniel Ethridge, and John M'Combs, of Little Falls, New York, which when propelled by one horse, and tended by two men, will thresh from 6 to 10 bushels of any grain in an hour, perfectly clean, and ready for fanning ; a fanning mill may at the same time be turned by the same power. One thousand pounds of hemp or flax, may be well broken in one day by this machine, without waste, and Spanish hides or any kind of leather may be broken, with the greatest ease and expedition. The expense of a machine of one horse power, does not exceed $50 and one of two horse power may be made to perform double the amount of expense. The invention has been patented.

## HUMANITY TO BEES.

A Shoemaker, who resides in the East of Sussex, has, for three following seasons, it is credibly asserted, taken the honey from his bees, without destroying them, by the following simple means: The hive that contains both bees & honey must be placed bottom upwards, on a form, with a round hole cut in it of sufficient dimensions to receive the crown of the hive, and to keep it in an erect position in its inverted state. Over this hive he places another, well smeared with strong beer and honey mixed together, and filled about half full of sweet flowers, sweet and aromatic shrubs, herbs, &c. then placing it, rim to rim, over the inverted hive, the bees ascend into it and become so tipsey by feasting on the honey and beer, that they

additional weight of a large wheel will require a mere trifle more of water, if it be properly applied.

Take care to apply your gearing to the same side of the wheel, on which it takes the water. A wheel geared in this way, will last double the usual time; as there is no strain upon the arms, and scarcely any friction upon the axle. The wheel will nearly float between the weight of the water, and the counteraction of the power. But if you apply the water upon one side of the wheel, and drive off the opposite, you have both the weight of the water and the weight (or resistance) of the works, pressing upon the axle; besides a severe strain upon the wheel.

You may not understand this. I shall endeavour to demonstrate it—suppose you suspend one cwt. to each end of a common weigh beam:—You have then two cwt. pressing upon the fulcrum. Remove one—suppose the *power*—you have then only one cwt.—say the *water*—which also is taken off, by applying the power at the same side; as the one is dressing down and the other up.

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A threshing and breaking machine, has lately been invented, and put in operation by Daniel Hulbert, Nathaniel Ethridge, and John M'Combs, of Little Falls, New York, which when propelled by one horse, and tended by two men, will thresh from 6 to 10 bushels of any grain in an hour, perfectly clean, and ready for fanning ; a fanning mill may at the same time be turned by the same power. One thousand pounds of hemp or flax, may be well broken in one day by this machine, without waste, and Spanish hides or any kind of leather may be broken, with the greatest ease and expedition. The expense of a machine of one horse power, does not exceed $50 and one of two horse power may be made to perform double the amount of expense. The invention has been patented.

## HUMANITY TO BEES.

A Shoemaker, who resides in the East of Sussex, has, for three following seasons, it is credibly asserted, taken the honey from his bees, without destroying them, by the following simple means: The hive that contains both bees & honey must be placed bottom upwards, on a form, with a round hole cut in it of sufficient dimensions to receive the crown of the hive, and to keep it in an erect position in its inverted state. Over this hive he places another, well smeared with strong beer and honey mixed together, and filled about half full of sweet flowers, sweet and aromatic shrubs, herbs, &c. then placing it, rim to rim, over the inverted hive, the bees ascend into it and become so tipsey by feasting on the honey and beer, that they

sleep the whole of the next day in their new habitation, consequently, may be removed to any place that might be thought proper, leaving their property behind them, but saving their lives.

## CURE FOR TETTER, OR RING WORM.

After I had the tetter for nearly twenty years on my hand, and had used dollars worth of celebrated tetter ointment, which took off the skin, repeatedly, without effecting a cure, a friend advised me to take some Blood Root, (called also Red Root, Indian Paint, &c.) slice it in vinegar, and afterwards wash the place affected with the liquid. I supppose the vinegar extracted the strength out of the root, for in a few days the dry scurf was removed, and my diseased hand appeared as whole as the other. I could scarcely believe that a perfect cure was so speedily accomplished by this simple remedy, but as nearly two years have passed without the least appearance of its return, I need no longer doubt the fact, and for the benefit of others, I wish the value of the Red Root to be more generally known.

"It grows about a foot high in rich woodland, and flowers in April. The leaf is roundish and deeply indented, somewhat like white oak leaves—stems naked, supporting single flowers, blossoms white. When the fresh root, which is about the size of the little finger and blood red, is broken; a juice issues in large drops resembling blood."

## MEASUREMENT OF A COW'S UDDER.

A few days since, in the presence of the President of the Bank of Baltimore and several other gentlemen, the udder of Mr. H. Thompson's dun cow, which some years since took the first premium, measured around the centre horizontally, 5 feet 2 inches. From the top of the udder behind, the string stretched along the surface of the udder between the teats, to the top in front, measured 3 feet 10 inches; from the point of one of her front teats to the point of the other, was 14 inches. The milk was dripping from every teat and the cow calved that night.

The common mustard seed which grows with very little cultivation, and is easily gathered and cleaned by those farmers who have floors for threshing wheat and flax seed—is worth from three to four dollars per bushel. An acre of good land will produce from 15 to 20 bushels.

## DISEASES OF FRUIT TREES.

*Extract of a letter from a distinguished Horticulturalist in Massachusetts.*

"I have read with great pleasure, Mr. Buel's remarks on Mr Worth's paper, and I feel sure from long and very minute observation, that he is right, entirely right. That the disease which attacks the plum and morello cherry, and our native plants of the ge-

nus cerasus, (for they in our woods are nearly destroyed by it) *is not* owing to an extravasation of the sap, of which the insect avails itself, is perfectly well known to me. I say it with perfect confidence. The disease afflicts the young & the healthy as well as those which are bark bound. It is seen chiefly in the young and healthy branches, and I have opened them within two days after the first rupture, and always found the insect. The destruction of the insect in that stage uniformly cured the complaint, without any splitting of the bark, a dangerous remedy. It is so, precisely so with all the other wood eating insects—those which infest the white pine and the locust. By carefully cutting off the diseased limb, on all your trees, you extirpate it from your grounds. I first discovered the cause of the blight in pears; and carried the insect to Prof. Peck. The insect had completely girdled the trees, and they perished. By early excision I have rooted it out of my grounds, and have no doubt we might raise the locust as our ancestors did, by the same care and attention."

## BOILING MILK.

Perhaps it is not so generally known as it ought to be, that the boiling of milk before it is set away for the cream to rise, will completely divest it, and of course the butter made therefrom, of the very unpleasant flavor arising from the cows having fed upon garlickly pastures—the boiling ought to be continued for at least half an hour—this dairy secret, if it be one, I have learned from a female friend, who has been in the habit of availing herself of it for some years.

EDWARD TILGHAM.

## DISEASE OF PIGS.

Cook or boil all food for pigs when weaned young. Corn meal, as a general food, is best; but even this in its first use, should be mixed with a little chop rye and a small portion of shorts, to correct its fermenting qualities; and *always* season the mess with a due quantity of salt. This article, so seldom thought of for hogs, is as essential to their health as to any other species. Milk is a valuable food, and answers well to mix with meal, but should be be boiled.

W.

### AN EXCELLENT AND CHEAP FOOD FOR FATTENING HOGS.

Take one part of corn meal, and two parts of pumpkins; mix and boil together, seasoned with salt; let this be their common food until twelve or fifteen days before killing, when feed on coarse dry meal seasoned.

### NEW AND VALUABLE APPLICATION TO FRUIT TREES.

We have been assured by a gentleman who has experienced its effect, that potash dissolved in water makes an excellent wash for

fruit trees. The proportions, which our informant recommends, are one pound of potash to three pints of *rain* water. The wash to be applied by a swab, to the trunk and limbs of the tree the latter part of May, or beginning of June, and soon after pruning. We are told that this application was introduced in Medford, Mass. by the late Gov. Brooks, the summer before his decease; who believed that it not only greatly accellerated the growth of the trees, but *was an effectual preservative against the borer.* One application is sufficient for a season. The wash is so corrosive that it will soon destroy a brush made of hogs bristles, whence a swab is preferred for applying it. This mode for treating fruit trees also destroys the bark louse, and it is said to give the trees apparent health and vigour, in a much greater degree than lime, soft soap. Forsyth's composition, or any other of the paints or washes commonly used for similar purposes. Whether it will prove favourable to the longevity of the trees, can only be ascertained by time and future experiments. If any injuries to the trees is apprehended from the corrosive quality of the liquid recommended, it may be well to increase the proportion of the water; say two quarts or more to a pound of potash.

N. E. Farmer.

## ON PLANTING VINEYARDS.

The first thing to be considered in planting a vineyard is, the choice of soil and situation. The best soil is such, whose surface is a light sandy loam, and not above a foot and a half, or two deep, above the grave or rock; either of which bottoms are equally good for vines. But, if the bottom is a heavy clay, it is not so good or proper: but all soils, however, except a heavy clay, will answer. The next thing to be considered, is the situation, which appears to me, from what I have observed in my practice, should be on high ground, near the top of a hill, open to the east, south, and west, with a gradual descent, that the rains may the better drain off. Where the descent is too steep, it requires more than double the labour to cultivate the ground, than where the descent is more moderate. Part of my vineyard is on the steep side of a hill, and I observed that the grapes near the top of the hill ripen sooner, and are better than those half way down: and on the top of the hill I sometimes have the delicate foreign grapes, whereas, on the side they crack and burst. But it is of advantage to have the vineyard sheltered on the north and northwest.

The vineyard should always be open to the east to dry off the moisture of the night as early as possible; and I am inclined to think that, in our climate, the north side of a hill with a gentle slope, will be found best, for from the great amplitude of the sun in summer, where the vines face the south, our common practice in planting, the dew and rains are not dried off until between eight and nine o'clock in the morning, and then in the heat of the day, if the grapes are not sheltered by the leaves, their skin is scorched, and they either dry up or never ripen well; when, if the vines were planted on the north side of a gentle sloping hill, they would

be dried by the first rays of the sun in the morning, and in the middle of the day it would be shining over the descent with a more moderate heat, than if facing the south. This would be a great advantage, especially for the more delicate foreign grapes, though our native grapes, from the thickness of their skins, stand moisture, heat, and every thing else, with impunity.

Having made choice of the soil and situation, the next thing is to prepare the ground for planting. On land where there has been an ameliorating crop, or where the ground had been well ploughed the preceding autumn, plant in February, March or April, according to the climate, or they may be planted in October or November. The land should again be well ploughed, and after having made it pretty even, the rows should be marked out, (to suit the situation or exposure,) at ten or twelve feet apart, and they should be crossed again, at four, five, or six feet distant in the rows, which will mark out the place where every plant is to stand. I think these distances are much better than where they are planted nearer to each other, as the sun and air will have full scope to dry off the dew, damps, and all other unnecessary moisture.

Having considered the distance which is necessary to plant the cuttings, the next thing is to dig the holes to put them in, which ought to be from eighteen inches to two feet deep, and about eighteen inches square: and to expedite the business, it will be best to have the holes dug before hand, and provide a number of stakes to tie the shoots of the vine to, according to the number of cuttings to be planted; common laths, such as are used for the seiling of houses will last for the first two years. After having the holes dug, which ought to be done as early as possible, (in the month of February to the middle of April, according to the climate,) and the cuttings provided from sixteen inches to a little more than two feet long, according to the length of the joints, as there should not be less than five eyes or buds to each cutting. If the hole should be too deep for the cutting, put some of the best earth from the surface in it, then put one good cutting into each hole, with a little slope, and the top from the sun; then fill it with the best earth from near the surface, at the same time pressing it gently with your feet to the cutting, and put the earth upon a level with the upper eye or bud, and level with the surface of the ground. If the upper eye or bud should be above the ground, raise a small hillock so as to reach it; and if it should be covered about half an inch, this will be no harm, but be rather an advantage, as it will keep the sun from drying it. This upper bud generally will alone shoot; but if from any circumstance the upper eye or bud should perish, then remove the earth to within half an inch of the next eye, which will shoot strong and vigorous, and the roots will put out from below.*

After the cuttings are planted they will require no further care until they shoot, except to keep the ground clear of weeds, which must be constantly attended to. When the cuttings begin to shoot,

*At the time you plant your cuttings, set a stake by each, to tie the shoots to when they are sufficiently strong.

and as soon as they are of sufficient length, they must be fastened to the stake to prevent their breaking, and as the shoots advance the fastening should be renewed, and all small lateral shoots should be entirely broke off with the finger and thumb as they appear. In the month of October when the vines have done shooting, they should be pruned, for if they are left unpruned until the spring, their shoots being tender, especially towards the upper parts, will be in danger of suffering if the winter should prove severe.

This pruning, after rubbing off the lower eye or bud, is to cut down the shoot so as to leave it two eyes; and if after this is done, the earth be drawn up in a hill about each plant, it will be a defence against the frost. This is the whole management required the first season. JOHN ADLUM.

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## HOPS.

A farmer in Middlesex county Massachusetts, cultivated five acres with hops the last year, and sold the crop for 2200 dollars or 440 dollars per acre. The editor of the Concord Gazette believes that hops can be raised for 7 cents per pound, as easily as corn for 1 dollar per bushel.

The above article strongly incites the farmer in Pennsylvania to the culture of products which now engage very little or no part of his principal attention, which under the present, and we may say permanent state of things are in great demand, and which yield a vastly greater profit than grain. The cultivation of hops, by which the Middlesex farmer realized 440 dollars from each acre, neither adds much to the labor, or occupies much of the ground of a farm to produce a highly appreciable accession to its profits; and we may venture the assertion that scarcely five hundred acres, if indeed so many, of this state, are appropriated to it, well as our soil is adapted to their growth. Our land yields abundant crops of grain, and in our opinion, the agriculturalist merits richer rewards than the warrior or statesman, for having so much improved this natural source of prosperity to the commonwealth; but if he has done much, we believe he can turn his farm into a still more productive mine of wealth. Wheat, rye, corn and oats, are the crops which, under the established course of agriculture, chiefly enrich our fields and overstock the market; while barley, hops, potatoes, rhubarb, &c. are so much neglected that we do not raise a supply for the consumption of the state, when in truth we might furnish some of the other states with them, whose soil is not calculated for their culture. Nor is there, we think, sufficient attention paid to the raising of beef, or growing of wool; both necessaries of life for which there will be a greater demand as our population and manufactories increase, and that these will increase no man can pretend to doubt.

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FROM THE WASHINGTON REPORTER.

*Friend William*— *East Bethleham, 5th mo. 3d,* 1826.

I observed from reading thy last paper some attention is about being paid to what I conceive to be an important subject, the Silk

Worm. I think thee will agree with me and my friend in its importance when we reflect, that it furnishes a useful and profitable employment, for a class of persons whose labour is almost lost, in our country, for we have no extensive manufactories, in which to employ women and children. I enclose thee a letter written for my use, only, received some time ago, from a friend who is in some degree acquainted with the business. My object in so doing is to bring out information; and should any of thy readers be able to give us any thing better, or correct any errors into which he may have fallen, no one shall be better pleased than thy friend,

M. T.

"*Esteemed Friend*—

"Your application to me as the most suitable person to give you information on the subject of the Silk Worm, was unfortunate, as I have devoted but a small portion of time to it; but what I have collected from books, and my very limited experience, shall be given with pleasure, I have consulted Mr. Mahon's Gardening, a valuable work, which, if you have not, you should most certainly procure, and to it you are indebted for most of the information I now give you. Also, a pamphlet published many years ago, in Philadelphia, by a Mr. Aspinal, and Cary's American Museum; both of which should be read by persons engaged in the business of rearing the Silk Worm.

"The Silk Worm, or Phalæna Bombyx Mori, is a native of China, their natural food is the leaf of the Mulberry tree. About the 1st of May, the eggs should be placed on paper or cloth, in warm exposures, where the heat of the sun will hatch them. They must be closely watched during this time, and immediately on the worms making their appearance they should be supplied with some tender leaf; the common Sallad will answer, but the Mulberry is much the best. The leaves should be given frequently, but in no case whilst wet with dew, or rain. In the course of eight or ten days the worm is seized with a lethargic sleep, for three days, when it changes its skin—it then eats greedily for seven or eight days, when it is again seized in the same manner, and during the time of their feeding, which is about six weeks, they have three or four attacks and changes of the kind above described, at which times they should have but little food. In the management of the Silk Worm, cleanliness is an object of the first importance. A good plan for removing them from their dirt and the leaves is, to throw a light net over them, on which place fresh leaves; the Worm will pass up through the meshes and fasten upon the leaves, when they may be removed without injury. It is, also, important that the room in which they are kept should be dry and well aired. When they have fed the full time, they will become almost transparent, and sickly; then dry branches divested of their leaves should be placed over them, on which they will fasten, and in a few days they are covered with silk; at this period ceases all trouble with the worm. It requires about two weeks to complete their ball, or cocoon, and very soon after it bursts from its silky habitation in the form of a Butterfly, of a whitish colour, each female of

which deposits many hundred eggs and dies without tasting food. To preserve the eggs, a piece of white paper should be placed under each cocoon. The eggs should then be put away in some dry situation, preserving them both from heat and frosts, until wanted for hatching the ensuing season. The method of winding the silk is to throw the balls, (whatever number you may wish, say ten or fifteen) into a basin of hot water, then find the ends of the silk, which may be done by stirring them with a rough stick, after which there is no difficulty in winding and twisting upon a small reel made for the purpose. It is said by some that a small quantity of Gum Dragon or a little ley added to the water facilitates the operation.

"You, also, enquire as to the food. It has been already said that the Mulberry is the natural and of course the best food. Indeed, I believe none other will answer the purpose for the manufacture of silk. It is also believed, that the White Mulberry produces the best silk. These may be propagated either by the cuttings or from the seed, and flourishes best in a moist rich soil. The fruit of the white is not considered equal to the black. Some suppose that our Red Mulberry will do well for raising the Silk Worm. The best method of raising the Mulberry is to plant them thick and keep them low, they will in this way produce more leaves upon the same quantity of ground, and can be picked from the tree without the trouble of climbing. It has long been a matter of astonishment with me that all atttention to this subject has died away. Before the revolution it was attended to, and so far as I can learn, with perfect success. There can be no doubt but that our climate and soil are admirably adapted to the Mulberry. For your country I cannot say, but I have been told your forests abound with the tree in its natural state—If this is the case there is no doubt but they will improve with cultivation; I hope ere long to see this subject meet with the attention it deserves. It was considered by that venerated patriot and sage, Doctor FRANKLIN, an object worthy of his attention; and I would ask why should it be considered too trifling for the great men of our day? When this is the case we may expect something to be done.

"I have occupied more time and paper than I expected. If what I have collected and given you in this hasty sketch will be of any use to yourself, I shall be amply compensated. I remain your sincere friend, P. O.

The seed of the Mulberry should be sown from the middle of April to the first of May.

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FROM A DELAWARE PAPER.

## ON GRAZING.

We have received from a friend of Mr. Barney, a statement of the product of his grazing establishment, some notice of which was recently presented to the view of our readers, in a communication in our columns. As this statement will be likely to be highly interesting to a large portion of our readers, and may be of con-

siderable service to many, we feel a pleasure in laying it before them.

Mr. Barney has resided in our state nine years, within which time he has raised the greatest part, and fed and disposed of all the following animals. In the year 1816, November 31st, he sold to Rusk and Kelso, of Baltimore 70 head of oxen, at 90 dolls. per head, amounting to 6,300 dolls; each weighing upwards of 900 lbs. and carrysng 150 lbs. of rough tallow. In the spring of 1817, he sold to G. Elliot, of the same place, 8 Bakewell sheep, for 27 dolls. 50 cents each, all wethers. In the following spring, he had 22 slaughtered for the same market, which brought him 450 dolls.; and in 1819, he sold to Mr. Elliot 17, for 350 dolls. the aggregate weight of which was 1960 lbs. and the rough tallow 365 lbs. He sold, at the same time, to John and George Rusk, the Delaware and Columbus oxen, for 31¼ cents per pound, the last of which weighed 2090 lbs. nett beef, and the other 1851¼ lbs. nett beef; some further particulars respecting which oxen and sheep, are furnished in the American farmer, Vol. 1. March 25, 1820, he sold to the latter gentleman a cow weighing 1342 lbs. nett beef, and a heifer of 1117 lbs. nett, for 15 dolls. per hundred, amounting to 368 dolls.; and at the same time, to George Pepper, a hog, for 85 dolls. weighing 675 lbs. and to G. Elliot 31 sheep, for 450 dolls., all of which were slaughtered in Baltimore, March 8, 1821, he sold to J. and G. Rusk, 3 steers, four years old, for 13 dolls. per hundred, weighing 4190 lbs. and remarkably fat; a rump of the largest of which was presented, by Gen. Ridgley, to the President of the United States. On the same day he sold to Mr. Elliot 31 fat wethers and ewes for 371 dolls. March 18, 1822, he sold to Wolpert and Miller, of Philadelphia, a cow for 105 dolls. 70 cents, the four quarters of which weighed 1057 lbs. nett beef, and at the same time to Peter Inckle 33 sheep, weighing 3385 lbs. nett mutton, for 495 dolls. March 29th, 1823, to James Elmore, of Baltimore, 2 steers, 4 years old, weighing 1405, and 1306 lbs. nett beef, for 12 dolls. per hundred, and April 5, of the same year, to Thomas Curtain, 40 sheep, one and two years old, for 520 dolls. weighing 3834 lbs. nett mutton, and to G. Bowers, a hog, weighing 751 lbs. nett pork, for 75 dolls. March 8, 1824, to James Elmore, a five year old steer, for 15 dolls. per hundred, weighing 1607 lbs. and amounting to 241 dolls. 05 cents; to Thomas Curtain, 16 sheep at 13 dolls. per head, and to G. Bowers, 2 hogs, for 90 dolls. January 26, 1825, to Charles Nonater & Co. of Philadelphia, a five years old twin heifer, for 420 dolls. the four quarters of which contained 1678 lbs. nett beef, and one four years old steer for 100 dolls. and weighing 1397 lbs. nett beef. And a short time since, 46 sheep in Philadelphia, weighing upwards of 4300 lbs. The whole of the sales above stated amount to upwards of 13,500 dollars, in less than nine years and six months!

It may be observed that the last mentioned heifer, which brought 420 dollars, the cow sold to Wolpert and Miller, in 1822, for 105 dolls. 70 cents, the steer sold to J. Elmore, in 1824, for 241 dolls. 05 cents, and two calves sold for 40 dollars, amounting in all to 806 dollars 75 cents, were all descended from the cow sold to T.

and G. Rusk, for 201 dollars 30 cents; and which cost Mr. Barney but 50 dollars; making the sales of the cow and her descendants 1008 dollars 15 cents; exclusive of the cheese and butter made from the two cows. The twin heifer was a cross of Gen. Ridgley's Bakewell breed of cattle, and was a very remarkably fine beast.

So much for Mr. Barney's establishment; and such is a sample of what the state of Delaware is susceptible of being made to produce under proper management and attention.

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## FARMER'S IMPERIOUS DUTY.

There is no higher obligation under which an independant farmer lies, than that of a strict, moral, religious attention to his laborers. To know, that he himself is not to be ignorant, for an ignorant man can teach no one. Intellectual pleasures best secure a man against the pleasures of vice.

The standard of knowledge among our labouring people is low, compared with what it should be. It would be quite contemptible to suppose that farmers are to study Latin and Greek. But it is desirable that they should be well versed in all the knowledge that belongs to their occupation. There is time enough for it. A labouring husbandman, who is reading and studying what belongs to his art, is pursuing the most interesting of all knowledge. It is the mystery of nature, in the soil, the plant, the fruit, the seed, the elements.

Why should not our children be taught it, and why should not the labouring man have the books, which give him his knowledge. But the time, who has it? No husbandman has it in the season of hurry and harvest, for the harvest knows no hours, and a man must then work till ten o'clock at night, if safety to his crops requires it. Let him save five dollars out of his gin and rum, and cider brandy, and buy that amonnt of good books this year, and as many the next, and so on, and then let him read them in the long winter evenings that pass from October to March, when he is neither sowing nor planting, nor attending to his cattle, and when he would otherwise be dawdling about, drinking ginger and cider, and doing nothing. He will find there is time enough; he will increase his capital with the least disbursement; he will give dignity to his occupation, and best secure himself against temptations to intemperance.

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FROM THE PENSACOLA GAZETTE.

## EXTRAORDINARY COWS.

Sir—In your Gazette of the 26th November last, we see that at Worcester Cattle show, the Governor of Massachusetts has offered for Exhibition a cow, which has often given 27 quarts per day. When visiting the *Chalais of Gruyere* in Switzerland, thirty years ago, I have there seen numerous herds of cows, which yielded from 50 to 64 quarts of excellent milk each every day. Some time after, when visiting the establishment of Mr. Chaber, the director of the veterinary school of Alfort, I saw the same species of animals affording upon a soil far inferior to the former, as much as three

buckets or 12 gallons of milk, and never less than 8 gallons every day.

Mr. Chabert in his publications, said that he had observed that cows, fed in the winter upon dry substances, give less milk than those which are kept upon green diet, and also that their milk loses much of its quality. He published the following receipt, by the use of which his cows afforded him an equal quantity and quality of milk during the winter as during the summer.—Take a bushel of potatoes, break them up whilst raw, place them in a barrel standing up, putting in successfully a layer of potatoes and a layer of bran and a small quantity of yeast in the middle of the mass, which is to be left thus to ferment during the whole week, and when the vinous taste has pervaded the whole mixture, it is then given to the cows, who eat it greedily.

The inhabitants of Pensacola own thousands of cows, yet I know no place where milk is so scarce: Is it not possible to remedy that scarcity, by the use of the above, as a winter food for the cows? But, as bran is never seen here, and as the Irish potatoes, so named, are too dear for the purpose, I would propose the following alterations to the receipt.

Take any quantity of sweet potatoes, break them, the finer the better, have an equal quantity of corn and peas or both together, or rough rice when cheap, boil them and mix them quite hot with the raw potatoes, no yeast will be necessary, inasmuch as the saccharine particles of the sweet potatoe will produce the vinous fermentation and be much more productive of milk than the other kind of potatoes. One fourth part cotton seed, still fresh or out of a mass where they have begun to ferment and thus prevented from becoming dry will very well replace any of the other grain above mentioned. In Switzerland, where chesnuts are extremely abundant, they make use with equal success of a similar precaution, in which that fruit forms the principal ingredient.

## POLITICAL ECONOMY.

To enter upon agriculture in this country, very little capital, and as little skill are required. Wild land is cheap, and whoever can handle an axe, and is inured to labour, may soon possess a farm and support a family.

The facility, with which a subsistance is thus procured, has induced the mass of our population to apply themselves to this occupation. The consequence is, that for a time, throughout the interior, where every man is a farmer, and there are none to purchase his produce, all are obliged to depend for the supply of their wants upon their household means.

Agriculture, in this stage, contributes little to the augmentation of national wealth. But as population becomes denser, and other occupations and employments arise, it grows more productive, and in proportion as these multiply, so does the income of agriculture increase, and with its income its capital.

The greatest encouragement which can be given to agriculture, is that which excites to other kinds of industry. This affords to

the farmer a market for his produce, and such articles in return, as increase his enjoyments.

By the increase of other kinds of industry, the farmer not only has a better market for his produce, but he finds that it increases the value of his estate. By means of it, he at once has a better living, and has became a richer man.

The establishment of new branches of industry tends to increase population, by the additional employment its affords to labour; and wherever we see population increasing from this cause, there we also have a rapid rise in the value of all the real property.

Capital in agriculture yields a less income in proportion to its amount, than capital in either of the other branches of industry. The reason of this is, that the demand for agricultural capital is greater than for capital in other employments. That the demand is greater arises from two circumstances; first, the greater security which agriculture affords to the investment of capital: the second is the greater number of persons there are who, unskilled to get their living in other employments, seek it in employing themselves, with what property they may have, in agriculture. Thus, as there is greater competition and less skill in the employment of capital in agriculture, than in the other branches of industry, the profits on its employment must necessarily be less in this than in the others.

In proportion as there is less skill employed in agriculture, than in the other productive branches, so must there be more labour employed to produce equal exchangeable values.

But though capital in proportion to its amount, and labour in proportion to its quantity, be less productive in agriculture than they are in other employments, yet as the agricultural class is so much more numerous than the other classes, probably four times as numerous as all the others together, it is from this class that the greatest values towards the augmentation of the national wealth arise.

The rapid growth of the agricultural capital is owing to the operation of three causes. The first is, the large tracts of wild land which are constantly coming under cultivation by the increase of population; the second is, the constant rise in the value of lands under cultivation, owing to the increase of other branches of industry; the third and last, is the addition annually made to the capital by what is saved from the annual product of agricultural industry.

Though agricultural industry becomes more productive as other kinds of industry increase, yet it will not possess its highest productive power, until the numbers of those in other occupations have so multiplied, as to create a demand for the produce of agriculture equal to the full power of its labour to supply.

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FROM THE NEW YORK STATESMAN.

## THE BEHNNEE PLANT.

The vegetable known by this name, has latterly attracted so much attention, as to have become tolerably well known. But fur-

ther information seems to be called for, in the age of horticulture. The following may prove useful as well as interesting.

*Remarks on the Behnnee of the southern states; in a note from Samuel L. Mitchell, to John R. Caldwell, Esq. dated New York, April 15th, 1826.*

Sir—Your paper of the seed produced by a famous exotic plant, now cultivated in Carolina and Georgia, was very acceptable. Agreeably to your wish I have offered samples to several cultivators, who, I hope, will afford them a fair chance of growing.

The *wild oiles grain*, as it has sometimes been called, was first mentioned to me by my friend, the late Governor Milledge, at Washington city, when we were in Congress together, about the year 1805. He told me it was observed by him in the gardens of the negroes. It is probable the slaves brought the seeds from Africa, as they are believed to have introduced those of the Ochra and the Pea-nut. After he made the discovery on his own plantation, and found the leaves and the seeds to be constantly in use by the black labourers and their descendants, he undertook the culture himself. He found it to be a semulcent of the highest order; and even to possess excellent nutritive qualities. The slaves were in the practice of applying the leaves to disorders of the skin, and alimentary canal, as the bark of the slippery elm is employed among us; and of boiling the seeds with their maize, to render the *Chomanee* more palatable and wholesome.

I requested him to procure some of the grain for me. This, I the ensuing season, planted at New York, and satisfied myself, by botanical examination, that it belonged to a species of *Sesamun*, known to the Egyptians and Asiatics, from time immemorial, and cultivated chiefly for the oil it affords. The plant is an annual, like *flax* and *poppy*; the seeds, like their seeds, yielding abundance of oil by expression. This is as good for every purpose as the oil of olives; with this advantage, that it is not so prone to become rancid by age.

It is incapable of ripening the seeds in the latitude of New York. Like the cotton plant, it is nipped by the frost before the blossom withers. But, for the southern states, where it can complete its fructification, I consider the planting of Sesamum as a rich resource in addition to their other advantages, whenever the attention of landholders shall be seriously directed to its culture. They have no need to trouble themselves about the growth and rearing of olives. Being an annual plant, the crop is completed within the vegetating season, and is the surer and more certain on that account; whereas the olive, as experience shows, is subject to great uncertainty, by reason of frosts, insects, and diseases.

The principal use of its culture in our region, is for the leaves. Your correspondent seems to understand their excellence. There is no private family, he supposes, which knows their value, that would ever neglect planting a few of the Behnnee-seed, every season, in some corner of the garden, to have leaves always at hand in case of need. "Although," he proceeds to observe, "the plant

requires a warm climate to bring its seed to maturity, it will grow well enough in any part of the United States to furnish its mucilage, during the season it is most generally wanted. One leaf immersed in a tumbler of spring water, changes immediately into a fine mucilage, that is perfectly clear, tasteless, and inodorous. It is an admirable remedy in the summer complaints of childen, dysentery, &c. Sick infants take it as they would clear water; and as it is perfectly innocent, they may be allowed to take as much as they like. The leaves of the Behnnee when dipped in tepid water before they are applied, afford great relief to inflamed eyes. They may be likewise used as a dressing for burns, and blisters, &c. with great advantage."

I shall continue to make distribution of the parcels in the best way that I can; and I solicit you to accept the assurance of my particular regard.

SAMUEL L. MITCHELL.

## REMARKABLE SPRING.

At 12 miles distant from Tallehasse, the new capital of Florida, is the Big Spring, the source of Wakula river. The celebrated fountain is one of the greatest curiosities in the United States. Ascending the river, about one mile below its source, it becomes so much obstructed by flags and river weeds, that it is with difficulty that a boat can be propelled up the stream; suddenly this immense spring breaks upon the eye. It is nearly one mile in length and of circular form. The water is almost as transparent as air itself. It is of unfathomable depth, which gives the water a deep blue tint, similar in appearance to the water in the Gulph Stream. It is stated that a plumb has drawn 250 fathoms of line without finding any bottom. After arriving the centre of the spring in a small boat upon a clear day, the appearance of the azure vault above, and the blue depth below, gave rise to a succession of the most singular ideas. It appeared after abstracting the surrounding foliage from the mind that we were suspended in the immense regions of space. The water is highly impregnated with decomposed limestone, which gives it that extremely transparent appearance which can only be accounted for by supposing that water impregnated with calcarious substances has much less refractive powers for light than water in a state of purity. The temperature of the water is very low, even in the warmest weather it has an icy appearance. It has however, a nauseous taste by being highly impregnated with the sulphuret of lime. On the northern side of this spring, a beautiful hammock rises gently from the water. This is the site of the former English Factory for the Indian trade, while this country was under the British crown, and afterwards the residence of the celebrated Ambrister, who was executed during the Seminole campaign. This fountain is fed from the subteraneous sources which gush from the bowels of the earth with incredible force rising in the centre with the velocity of boiling water. Some idea may be formed of the power with which it gushes from the earth, by its displaying a column of water more than 250 fathoms in height and removing

with violence the water on the surface. The spring is about 12 miles from St. Marks, and about 20 from the ocean.

## DOG AND GOOSE.

A Canadian goose, kept at East Barnet in Hartfordshire, a few years ago, was observed to attach itself in the strongest and most affectionate manner to the house dog, but never presumed to go into the kennel except in rainy weather; whenever the dog barked, the goose would cackle and run at the person she supposed the dog barked at, and try to bite him by the heels. Sometimes she would attempt to feed with the dog, but this the dog, who treated his faithful companion with indifference, would not suffer. This bird would not go to roost with the others at night, unless driven by main force; and when in the morning they were turned into the field, she would never stir from the yard gate, but sit there the whole day in sight of the dog. At length orders were given that she should no longer be molested; being thus left to herself, she ran about the yard with him all night, and what was particularly remarkable, whenever the dog went out of the yard and ran into the village, the goose always accompanied him, contriving to keep up with him by the assistance of her wings, and in this way of running and flying, followed him all over the parish. This extraordinary affection of the goose towards the dog, which continued until his death, two years after it was first observed, is supposed to have originated in his having saved her from a fox, in the very moment of distress. While the dog was ill, the goose never quitted him day nor night, not even to feed; and it was apprehended that she would have been starved to death, had not a pan of corn been set every day close to the kennel. At this time, the goose generally sat in the kennel, and would not suffer any one to approach it, except the person who brought the dog's, or her own food. The end of this faithful bird was melancholy; for when the dog died, she would still keep possession of the kennel; and a new house-dog being introduced, which, in size and colour resembled that lately lost, the poor goose was unhappily deceived, and going into the kennel as usual, the new inhabitant seized her by the throat and killed her.

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Some Date Trees, planted in New Orleans about 6 years since, are this season in blossom. The tree grows slowly, and it is said to produce in 12 years from planting, but will live and bear 300 years. Besides the value of its fruits, mats and baskets are made of the leaves; ropes of the fibres, and the trunk is good for building or firewood. Its appearance is beautiful, elevating its trunk 30 or 40 feet without branches—the leaves which spring out at the top form a kind of capital to the pillar.

## DESTRUCTION OF ELMS.

Mr. Macleay, in the report to the Ranger of the Parks, inserted

in the Edinburgh Philosophical Journal, says of this evil, "St. James and Hyde Parks afford at present too many examples — The elm-trees in both, and particularly at St. Jame's Park, are rapidly disappearing, and unless decissive measures be soon taken to resist the progress of the contagion, we must not only expect every tree of this species to be destroyed in the Parks, but may have to regret the dissemination of the evil throughout the vicinity of London. In St. James's Park, which has more particularly been subject to my examination, there are several species of the beetle to be found attacking the elms. That species, however, which occasions all the havoc which we have now to lament in the Mall and Bird Cage Walk, is the "Hylesinus destructor' of Fabricius, or "Scolytus destructor' of Latreille, an insect of which the history is briefly as follows. A small beetle, with its head rather covered with hair, having a polished black thorax, and brown wing-cases, may be seen in numbers running over the trunks of the elms from the first of March to the first days of July, but principally about the end of May or commencement of June. It may then be seen entering into the holes, with which the bark appears perforated as though with a gimblet. It insinuates itself into these holes, or into the crevices of the bark, for the purpose of depositing its eggs. On stripping off a piece of the loose bark, we may easily at any season understand how the barking of trees is effected by these minute animals, for the surface of the wood thus exposed presents to the view innumerable impressions, which may be compared to impressions or casts of large and broad scolopendræ. The middle or body of this singular impression marks the path of the perfect female insect, while employed in laying her eggs, which is to her, as to most other winged insects, the immediate forerunner of death. From this tubular path, however, in which she deposits her eggs, the larvæ, which are hatched from these eggs, in the shape of little white apod worms, proceed nearly at right angles, eating their way in parallel smaller tubes, which, lying close to each other effectually serve to separate the bark from the tree. The larvæ remain feeding in the tree, generally between the bark and the wood, throughout the winter season. About the commencement of spring they assume the pupa or nymph state, and before the end of this season, the bark of an infected tree begins to appear as if its crevices were full of very fine saw dust. The last change of the insect takes place; and being now winged, it tries to arrive at the external air, for the purpose of propagating its species, and laying its eggs in other trees. Each hole which now appears as if made with a gimblet, marks the exit of a perfect insect. In the first instance, the voracity of the larvæ; and, in the second, the endeavours of the perfect insects to liberate themselves from the wood, particularly when such attempts are made by the most infinite numbers, soon occasion the bark to fall in large pieces. The consequence is, that the new leaves only make their appearance to wither, and the tree perishes.—The early entomologists, little acquainted with metamorphosis, on finding the perfect 'Hylesinus destructor' (*le Scolyte* of Geoffroy) on dead and dying trees, erroneously consider their disease to be the cause, and not to be the ef-

fect of the insect's appearance. Hence the *habitat* of the species, in many of the older entomological works, it is said to be *rotton wood*. The absurdity of this notion will, however, be obvious, on the slightest investigation of the evil, in its earliest stages. It is, for instance, allowed on all hands, that the tree perishes by being barked; and the mere inspection of any of the trees so barked, will sufficiently show that the mischief is effected in the manner above stated."

The "Hylesinus destructor" is peculiar to the elm, and it is recommended not to plant these trees where that pest prevails.—"In the year 1780, an insect,* of the same natural family as the "Hylesinus destructor," made its appearance in the pine forests of the Hartz, and was neglected. In the year 1783, whole forests had disappeared, and, for want of fuel, an end was nearly put to the mining operations of that extensive range of country. At the present moment, also, the French Government is in alarm at the devastation committed in their arsenals, by an insect well known to naturalists, under the name of "Lymexylon navale."

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Extract from Waterton's Wanderings in South America.

## AMERICAN SLOTH.

South America is the native country of the sloth. His looks; his gestures, and his cries, all conspire to entreat you to take pity on him. These are the only weapons of defence which nature hath given him. While other animals assemble in herds, or in pairs, range through these boundless wilds, the sloth is solitary and almost stationary; he cannot escape from you. It is said, his piteous moans make the tiger relent, and turn out of his way. Do not then level your gun at him, or pierce him with a poisoned arrow; he has never hurt one living creature. A few leaves, and those of the commonest and coarsest kind, are all he asks for his support. On comparing him with other animals, you would say that you could perceive deficiency, deformity, and superabundance in his composition. He has no cutting teeth, and though four stomachs, he still wants the long intestines of ruminating animals. He has only one inferior aperture, as in birds. He has no soles to his feet, nor has he the power of moving his toes separately. His hair is flat, and puts you in mind of grass withered by the wintry blast. His legs are too short; they appear deformed by the manner in which they are joined to the body, and when he is on the ground, they seem as if only calculated to be of use in climbing trees. He has forty-six ribs, while the elephant has only forty; and his claws are disproportionably long. Were you to mark down upon a graduated scale, the different claims to superiority amongst the four footed animals, this poor, ill-formed creature's claim would be the last upon the lowest degree."— * * * * *

This singular animal is destined by nature to be produced, to live and to die in the trees; and to do justice to him, naturalists must examine him in his upper element. He is a scarce and soli-

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* "Bostrichus typographus," *Fab.*

tary animal; and being good food, he is never allowed to escape. He inhabits remote and gloomy forests, where snakes take up their abode, and where cruelly stinging ants and scorpions, and swamps and innumerable thorny shrubs and bushes, obstruct the steps of civilized man. Were you to draw your own conclusions from the descriptions which have been given of the sloth, you would probably suspect that no naturalist had actually gone into the wilds with the fixed determination to find him out and examine his haunts, and see whether nature has committed any blunder in the formation of this extraordinary creature, which appears to us so forlorn and miserable, so ill put together, and so totally unfit to enjoy the blessings which have been so bountifully given to the rest of animated nature; for, as it has formerly been remarked, he has no soles to his feet, and he is evidently ill at ease when he tries to move on the ground, and it is then that he looks up in your face with a countenance that says, "Have pity on me, for I am in pain and sorrow."

It mostly happens that Indians and Negroes are the people who catch the sloth, and bring it to the white man: hence it may be conjectured that the erroneous accounts we have hitherto had of the sloth, have not been penned down with the slightest intention to mislead the reader, or give him an exaggerated history, but that these errors have naturally arisen by examining the sloth in those places where nature never intended he should ever be exhibited.

However we are now in his own domain. Man but little frequents these thick and noble forests, which extend far and wide on every side of us. This, then is the proper place to go in quest of the sloth. We will first take a near view of him. By obtaining a knowledge of his anatomy, we shall be enabled to account for his movements hereafter, when we see him in his proper haunts. His fore legs, or, more correctly speaking, his arms, are apparently much too long, while his hind legs are very short, and look as if they could be bent almost to the shape of a corkscrew. Both the fore and hind legs, by their form, and by the manner in which they are joined to the body, are quite incapaciated from acting in a perpendicular direction, or in supporting it on the earth, as the bodies of other quadrupeds are supported, by their legs. Hence, when you place him on the floor, his belly touches the ground. Now, granted; that he supported himself on his legs like other animals, nevertheless he would be in pain, for he has no soles to his feet, and his claws are very sharp and long, and curved; so that, were his body supported by his feet, it would be by their extremities, just as your body would be were you to throw yourself on all-fours, and try to support it on the ends of your toes and fingers—a trying position. Were the floor of glass, or of a polished surface, the sloth would actually be quite stationary; but as the ground is generally rough, with little protuberances upon it, such as stones, or roots of grass, &c. this just suits the sloth, and he moves his fore legs in all directions in order to find something to lay hold of; and when he has succeeded, he pulls himself forward, and is thus enabled to travel onwards, but at the same time in so tardy and awkward a manner, as to acquire him in the name of sloth.

Indeed his looks and gestures evidently betray his uncomfortable situation; and as a sigh every now and then escapes him, we may be entitled to conclude that he is actually in pain.

Some years ago I kept a sloth in my room for several months. I often took him out of the house, and placed him upon the ground, in order to have an opportunity of observing his motions. If the ground were rough, he would pull himself forwards, by means of his fore legs, at a pretty good pace, and he invariably shaped his course towards the nearest tree. But if I put him upon a smooth and well trodden part of the road, he appeared to be in trouble and distress: his favorite abode was the back of the chair; and after getting all his legs in a line upon the topmost part of it, he would hang there for hours together, and often with a low and inward cry, would seem to invite me to take notice of him.*

The sloth in its wild state, spends his whole life in the trees, and never leaves them but through force or accident. An all ruling Providence has ordered man to tread on the surface of the earth, the eagle to soar in the expanse of the skies, and the monkey and squirrel to inhabit the trees; still these may change their relative situations without feeling much inconvenience: but the sloth is doomed to spend his whole life in the trees; and what is more extraordinary, not *upon* the branches, like the squirrel and the monkey, but *under* them. He moves suspended from the branch, he rests suspended from it, and he sleeps suspended from it. To enable him to do this, he must have a very different formation from that of any other known quadruped.

Hence, his seemingly bungled conformation is at once accounted for; and in lieu of the sloth leading a painful life, and entailing a melancholy and miserable existence, on its progeny, it is but fair to surmise that it just enjoys life as much as any other animal, and that its extraordinary formation and singular habits are but further proofs to engage us to admire the wonderful works of Omnipotence.

It must be observed, that the sloth does not hang head downwards like the vampire. When asleep, he supports himself on a branch parallel to the earth. He first seizes the branch with one arm, and then with the other; and after that, brings up both his legs, one by one, to the same branch; so that all four are in a line: he seems perfectly at rest in this position. Now, had he a tail, he would be at a loss to know what to do with it in this position: were he to draw it up within his legs, it would interfere with them; and were he to let it hang down it would become the sport of the winds. Thus his deficiency of tail is a benefit to him; it is merely an apology for a tail, scarcely exceeding an inch and a half in length.

I observed when he was climbing, he never used his arms both together, but first one and then the other, and so on alternately. There is a singularity in his hair, different from that of any other animal, and, I believe, hitherto unnoticed by naturalists; his hair is thick and coarse at the extremity, and gradually tapers to the root, where it becomes fine as the finest spider's web. His fur has

* By this action the sloth signified, as plainly as a sloth can signify any thing, the manner of life which was agreeable to him.—Rev.

so much the hue of the moss which grows on the branches of the trees, that it is very difficult to make him out when he is at rest.

The male of the three-toed sloth has a longitudinal bar of very fine black hair on his back, rather lower than the shoulder blades; on each side of this black bar there is a space of yellow hair, equally fine; It has the appearance of being pressed into the body, and looks exactly as if it had been singed. If we examine the anatomy of his fore legs, we shall immediately perceive by their firm and muscular texture, how very capable they are of supporting the pendent weight of his body, both in climbing and at rest; and, instead of pronouncing them a bungled composition, as a celebrated naturalist has done, we shall consider them as remarkably well calculated to perform their extraordinary functions.

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FROM THE NATIONAL JOURNAL.

## TO THE MAY FLIES.

Ye tantalizing tribes that fill the air,
Say do you feel the weight of care
That presses mortals down?
Does the rude touch of pale disease,
Or poverty's hard hand displease,
Your feeble forms?

No, no—your life is short, but sweet,
Your dreams are light, your death a sleep—
Existence is a song:
You dance and sing in life's young spring,
And borne on zephry's balmy wing,
Your life is but a morn.

Say, do you wing your airy flight,
When basking in the rays of light
Shot from the orb of day,
And act your parts with courteous hearts,*
When he before the night departs,
Refuse his gentle sway?

Yes, such you are; and like him, too,
You praise and flatter power;
Nor are you found among the few,
Firm in misfortunes hour.

MERRIMACK.

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* It has been observed that this insect almost invariably, about sunset, flies with his head to the east: hence the allusion.